

Remarks

The title of the application is amended to now read properly.

Claims 1-24 are pending. Claims 8, 13, 16, and 21 are amended. Claims 22-24 are new. No new matter has been added to the application.

Claim Objections

Claim 21 is objected to because of the stated informality in paragraph 2 of the Office Action. Claim 21 is amended to fully address this objection.

Claim Rejections – 35 U.S.C. §112

Claim 13 is amended to correctly recite *said support assembly* in place of “*said retainer assembly*”. Applicant wishes to thank the examiner for pointing out this error.

Claim Rejections 35 U.S.C. §102

Claims 11 and 13-20 are rejected under 35 U.S.C. §102(b) as being anticipated by Feng (US ‘263). Applicant respectfully traverses this rejection. According to MPEP §2131, “a claim is anticipated only if each and every element as set forth in the claim is found, either expressly, or inherently described in a single prior art reference.” (citation omitted). “The identical invention must be shown in as complete detail as contained in the ...claim. The elements must be arranged as required by the claim.” Notwithstanding the Examiner’s statement that “Feng teaches an image module comprising, among other things, a support assembly 302 that are integrally installed over several circuit boards...” (Office Action page 3, line 16-17), the recited limitations in claim 11 of *an imaging module comprising a printed circuit board, an image sensor in electrical communication with said printed circuit board... and... a support assembly mounted to said printed circuit board*, is not disclosed by Feng. The support assembly 302 in Feng is in fact a shroud assembly for the imaging lenses L1, L2, L3 and L4 (Fig. 14). It is mounted in the lower housing 142 (Fig. 9) and abuts a printed circuit board 460 *via* lock washer 340. However, PCB 460 is not the *said printed circuit board in electrical communication with the image sensor* as recited in claim 11. Applicant respectfully

submits therefore that the rejection is unsupported by the cited art and should be withdrawn as being improper.

Applicant respectfully traverses the rejection of claim 16. First, claim 16 depends from claim 11, referred to above. Second, Feng fails to show *said printed circuit board* wherein *the imaging axis partially extends substantially parallel to said circuit board*, as required in claim 16.

The rejection of claim 14 is respectfully traversed, also, because it depends from claim 11. Moreover, the Examiner's mere speculation that the flexible printed circuit board 463 in Feng can replace *said printed circuit board* as recited in claim 14 is not a sufficient basis for rejecting the claim under §102.

The rejection of claims 15 and 17 under 102(b) is respectfully traversed for the same reasons as applied to claims 14 and 16, discussed above.

The rejection of claims 18, 19 and 20 are respectfully traversed in that they depend from claim 11. Moreover, Feng does not disclose *an aiming LED selected to have a radiation pattern that is more narrow than that of the illumination LEDs*, as required by claim 19. In addition, with respect to claim 20, diffuser optics 712a and 712b of Feng do not exhibit *a form fit* as required in claim 20.

Claim Rejections – 35 U.S.C. §103

Claims 1-10 and 21 are rejected under 35 USC 103(a) as being unpatentable over Feng ('263) in view of Arackellian *et al.* ('367). Applicant respectfully traverses this rejection on the basis that the Examiner has failed to establish a *prima facie* case of obviousness. According to MPEP §2143, three basic criteria must be met to establish a *prima facie* case of obviousness. The prior art reference (or references when combined) must teach or suggest all of the claim limitations. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Finally, there must be a reasonable expectation of success. Furthermore, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

A. The prior art references do not teach or suggest all of the claimed limitations.

Independent claim 1 of the instant invention requires, among other things, *an imaging module comprising a first circuit board, an image sensor carried by said first circuit board, a pair of aiming LEDs mounted on said first circuit board..., a one piece support assembly...comprising a pair of aperture defining members...a second circuit board received in abutting relation with a front surface of said support assembly...* In the Examiner's own words, "Feng fails to specifically teach or fairly suggest that a circuit board contains both image sensor and an aiming LEDs mounted on the circuit board (page 5, lines 8-9)... Arackellian [allegedly] teaches an optical reader and illumination system comprising a printed circuit board 78 on which a detector assembly 45 including a detector array 46 and imaging optics 49 and a plurality of LEDs 76 are installed (see Fig. 3A and 3B, column 3, lines 60+; column 5, lines 23+)". Upon close inspection of Fig.s 3A and 3B, it is seen that detector array 46 (image sensor) is part of a detector assembly 45 that also includes imaging optics 49, which are mounted within the head portion 42 of the symbology reader 40 shown in Fig. 1. Electrical signals from the detector array 46 are input to a microprocessor 56 mounted to a printed circuit board 62 mounted within the head portion 42 (Col. 3, 165 - Col. 4, 112). Thus, neither Fig.s 1, 3A nor 3B show the detector array mounted either on PCB 62 (Fig. 1) or on PCB 78 (Fig.s 3A, 3B). The Examiner further points to a plurality of LEDs 76 installed on printed circuit board 78. Applicant respectfully submits that LEDs 76 are illumination light sources and do not refer to aiming LEDs. Moreover, the light sources 53 for producing spotter (aiming) beams 55 are shown in Fig. 4 as being disposed on alignment board 86, which itself is attached to PCB 78 with a spacing there between. Nowhere does the '338 patent disclose or suggest to dispose an aiming LED on the same circuit board that a 2D image sensor is mounted, as required by instant claim 1.

Claim 1 further recites *a one piece support assembly...comprising a pair of aperture defining members*. Neither Feng nor Arackellian disclose or suggest an aiming aperture. The crosshair producing lenses 728 as shown in Fig. 19 of Feng does not meet this limitation.

Claim 8 requires, among other limitations, *an illumination assembly consisting of a single horizontally arranged substantially linear array of light*

sources mounted on said circuit board... The examiner has failed to show where either Feng or Arackellian disclose or suggest such an illumination assembly.

Claim 21 requires, among other limitations, *...said printed circuit board [including] a machined-away cavity; a reflective material disposed in said cavity, and a semitransparent sealing layer layered over said cavity.* There is no such disclosure, nor anything to suggest such an arrangement, in either Feng or Arackellian.

Claims 2-9 depend from independent claim 1 thus contain limitations not disclosed or suggested by the cited references. For example, claim 4 requires all of the limitations of claim 1 and, in addition, *a one piece optical plate which is received in abutting relation with said second circuit board...* Feng fails to disclose or suggest such an abutting relationship, and Arackellian lacks an optical plate or its equivalent. Regarding claim 5, neither Feng nor Arackellian discloses that *...an aiming pattern...is a split horizontal line.* Regarding claim 9, Feng does not disclose or suggest *a horizontally oriented cylindrical negative lens.* The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 23 U.S.P.Q.2d 1780, 1783-84 (Fed. Cir. 1992). Regarding claims 6 and 7, the Examiner has not pointed to any disclosure in Arackellian where it suggests or provides a motive to modify Feng to obtain a *pin receipt aperture and an adhesive receipt aperture* (claim 6), or, *key structures* (claim 7) in the manner claimed by Applicant. Instead, totally extraneous to the reference and contrary to the PTO's own rules, the Examiner suggests, without explaining or citing support, that "although Feng is silent on actual assembly of the component parts...[i]t is the Examiner view that some parts are connected utilizing adhesives, screws, etc."

Claims 10 and 12 depend, respectively from independent claims 8 and 11. The bases for the examiner's failure to establish a *prima facie* case of obviousness with respect to the independent claims is fully set forth above, thus claims 10 and 12 are not obvious in view of the cited art.

B. There is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

As neither of the references disclose or suggest all of the claimed limitations, they cannot motivate or suggest a modification to read upon the claimed invention.

C. There is no reasonable expectation of success.

Notwithstanding (A) and (B) above, assuming that the combination of the teachings would impart the many alleged size and cost benefits suggested by the examiner, it is curious that Feng did not incorporate such knowledge in his own disclosure in light of the fact that Arackellian and Salatto '411 both had earlier filing dates, and such knowledge was thus known in the art when the Feng application was filed.

Applicant submits that the examiner has failed to properly establish a *prima facie* case of obviousness, and respectfully requests reconsideration of the pending claims.

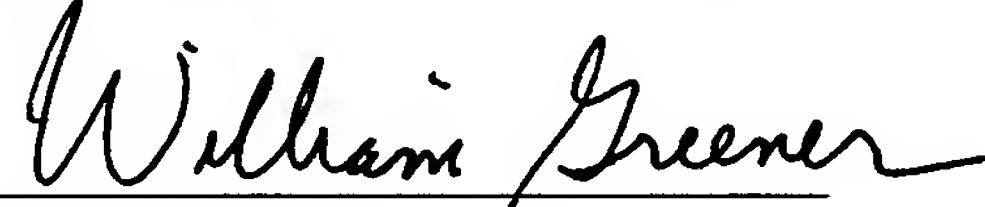
Applicant believes that no extension of time is necessary to make this Response timely.

Please direct any questions or comments to William Greener at (607) 256-8338.

Respectfully submitted,

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